

Applicant : Bruce N. Roesner  
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Attorney's Docket No.: 16165-004001

### REMARKS

Claims 1-24 are pending, with claims 1, 8, 15 and 20 being independent. Claim 1 has been amended. No new matter has been added. Reconsideration and allowance of the above-referenced application are respectfully requested.

The withdrawal of the previous claim rejections is noted and appreciated. Claims 1, 2, 4-8 and 11-24 now stand rejected under 35 U.S.C. 102(b) as allegedly being anticipated by Hum et al. (US 6,714,133). Claims 3, 9 and 10 now stand rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Hum et al. in view of Kayser et al. (US 6,266,052). These contentions are respectfully traversed.

Claim 1 has been amended to clearly distinguish over the cited art, and now reads, "A radio frequency identification (RFID) sensor system comprising: multiple spatially-distributed RFID sensing transceivers; first and second conductive paths, for receiving sensing signals from the RFID sensing transceivers; and a controller for providing a carrier signal on the first and second conductive paths, and for receiving the signals from the first and second conductive paths; wherein the spatially-distributed RFID sensing transceivers are non-inductively coupled in parallel to the first and second conductive paths." (Emphasis added.) As shown and described in connection with Fig. 2 of the present application, multiple RFID sensing transceivers 200 can be non-inductively coupled (e.g., capacitively coupled, directly coupled) to the conductive paths 202 and 204 in parallel and thereby communicate with a controller 206.

In contrast, Hum describes a system in which multiple communication lines (e.g., each being a pair of conductive wires) each terminate with "coupling ports", which are antennas (inductor coils) used to wirelessly communicate with transponders. (See Hum at col. 3, line 51 to col. 4, line 64.) Hum also describes repeater ports that allow communication through a series of inductive couplings. (See Hum at col. 11, line 51 to col. 4, line 64.) But Hum fails to teach or suggest multiple RFID sensing transceivers that are non-inductively coupled to first and second conductive paths in parallel. Thus, independent claim 1 should be in condition for allowance.

Dependent claims 2-7 are patentable based on the above arguments and the additional recitations they contain. For example, claim 5 recites, "wherein the sensing signals are

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capacitively-coupled from the RFID sensing transceivers to the first and second conductive paths". Hum clearly describes inductively-coupled signals, not capacitively-coupled signals.

Independent claim 8 recites, "a conducting path having first and second conductors; and one or more RFID sensing transceivers spatially-distributed along the conducting path and capacitively-coupled to the first and second conductors; and a controller coupled to the conducting path." (Emphasis added.) Independent claim 15 recites, "perceiving the stimulus with at least one RFID sensing transceiver; generating a sensing signal based on the stimulus; capacitively coupling the sensing signal to a conductor; and transmitting the sensing signal on the conductor to a signal reader." (Emphasis added.) Independent claim 20 recites, "multiple passive radio frequency identification (RFID) transceivers, each comprising a sensor; conductors located in proximity to the passive RFID transceivers and allowing capacitance coupling between the conductors and the passive RFID transceivers; and a controller coupled with the conductors to effect the capacitance coupling, power the passive RFID transceivers, and receive obtained sensor data from the passive RFID transceivers." (Emphasis added.)

As addressed above, Hum clearly describes inductively coupling. In contrast with Hum, the subject matter of independent claims 8, 15 and 20 covers capacitive coupling, which allows communication signals to cover a wide range of frequencies. (See specification at ¶ 26.) Hum needs tuned transponders to operate, whereas the subject matter of claims 8, 15 and 20 do not. Thus, the claimed subject matter is clearly different from, and has significant advantages over Hum. Therefore, independent claims 8, 15 and 20 should be in condition for allowance.

Dependent claims 9-14, 16-19 and 21-24 are patentable based on the above arguments and the additional recitations they contain. For example, with respect to claim 24, the art of record fails to show "a printed circuit board including nodes monitored by the sensors." (Emphasis added.) The limitation of claim 24 has not been addressed in the current office action.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific issue or comment does not signify agreement with or concession of that issue or comment. Because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been

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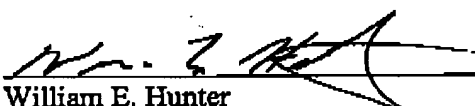
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expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

It is respectfully suggested for all of these reasons, that the current rejection is totally overcome; that none of the cited art teaches or suggests the features which are claimed, and therefore that all of these claims are in condition for allowance. A formal notice of allowance is thus respectfully requested.

No fees are believed due with this response. Please apply any necessary charges or credits to deposit account 06-1050.

Respectfully submitted,

Date: October 17, 2005  
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